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Marchlewski is also preparing a book on the application of Michurin's biology to breeding. The book will be based on research done by the Soviet scientists and on published and unpublished results of the Institute of Zootechnology.

Marchlewski is giving a course in Michurin's biology at the Zootechniczny Zaklad Doswiadczalny Polanka-Haller (Polanka-Haller Zootechnical Experimental Center).

Prof Walery Goetel of the Akademia Gornictwa i Metalurgii (Academy of Mining and Metallurgy), a geologist, believes in the application of this science to practical problems. The geological sciences constitute a basis for economic planning, especially in the present development of heavy industry.

Stanislaw Skowron, professor of the Akademia Medyczna (Academy of Medicine), states that biology contributes to other sciences, such as agrobiology, zootechnology, medicine, and veterinary medicine. Scientific research is done in groups on projects which meet the present needs of agriculture and medicine. All researchers work together through the Zaklad Biologii (Biological Research Center). After years of research on the effects of secretions of certain glands in the development and functions of an organism it was discovered that a certain chemical compound produced a vigorous reaction in sex glands.

At present Skowron, together with Professor Z. Kaminski and Dr Ewyn, are working jointly on experiments to increase fertility in animals and it is expected that soon the results will be applied in zootechnology. Research is also being done on plants to increase the content of medicinal chemicals. Work is being done on the regeneration of destroyed parts of organisms. The research of Lepeshinskiy, the well-known Soviet scientist, has opened new horizons. New methods developed by the Poles, which permit observation of the regenerative process under the microscope, have uncovered new facts of great importance to medicine.

Prof Witold Biernawski of the Academy of Mining and Metallurgy, specializes in the machining of metals, especially the problems of high-speed cutting and grinding to maximum smoothness.

Professor T. Lehr-Splawinski of Jagiellonian University works in the field of linguistics.

Prof Wladyslaw Szafer of Jagiellonian University works at three scientific research institutes: Instytut Botaniczny (Botanical Institute) of Jagiellonian University, which in the very near future will be changed to the Instytut Botaniczny Polskiej Akademii Nauk (Botanical Institute of the Polish Academy of Sciences); Ogród Botaniczny (Botanical Gardens); and Instytut Ochrony Przyrody (Institute for the Preservation of Nature and Wildlife). The Botanical Institute, founded in 1912 by Prof M. Raciborski, is about to publish Volume 8, Flora Polska (The Flora of Poland) and has published works concerning the changes of climate and plants of the glacial period in Poland. They are also investigating a method of analysing the dust of Poland's peat bogs and lake sediments for traces of old cultures. The institute has been doing research in plant sociology for almost 30 years, starting with the Tatry Mountain area. The study of plant affinities constitutes the basis for a rational management of forestry, meadows, peat bogs, etc. Numerous practical applications as a result of this research can be applied to use in the national economy.

Although the Botanical Gardens are a popular attraction, they contain plant collections unknown to the public. Research is being done on the acclimatization of plants, on competition between plants, on interaction between plants, and in dissemination.

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The preservation of nature and wildlife of Poland is directed from Krakow. For many years Krakow was the headquarters of the Panstwowe Rady Ochrony (National Council of Preservation of Nature and Wildlife), and the Institute for the Preservation of Nature and Wildlife is located at Krakow. The institute aims at the preservation of medicinal plants, management of forest preserves, and protection of birds.

Prof Julian Tokarski of Jagiellonian University conducts research in agriculture. Soil studies by Vil'yams, the Soviet scientist, have provided the foundation of work in Poland on the chemical composition of soils to determine their suitability for specific agricultural uses. Whereas precise chemical analysis is very time-consuming, Tokarski has developed a practical method of quantitative analysis. Samples of the soil are heated in special electric furnaces at progressively higher temperatures, ranging from 150 degrees to 900 degrees centigrade. As higher temperatures are applied, the mixture of mould, loam, limestone, and sand loses its water content or various chemical substances are burned out. By weighing samples after successive treatments, it is possible to make a quantitative analysis of various components. The Zaklad Gleboznawstwa (Soil Analysis Research Center) under Tokarski in the Faculty of Agriculture of Jagiellonian University has prepared a soil map of the Krakow region for the Krakow MRN (Miejska Rada Narodowa, Municipal National Council). The Soil Analysis Research Center can prepare such maps for all Poland.

Another deciding factor in agriculture is drainage. Professor Tokarski has devised a colorimetric hydrometer consisting of long narrow glass and metal tubes, which are placed into the ground. These contain silica gel saturated with chloride of cobalt which takes on a pink hue in the presence of moisture. This device allows for the observation of water movement to a depth of 50 centimeters at this time.

WORK ON EXPERIMENTAL CENTER -- Katowice, Przegląd Gorniczy, Vol VIII, Jun 52

On 2 May 1952, a periodic meeting of the Komitet Naukowy Zakladu Podziemnej Gazyfikacji Wegla (Scientific Committee of the Research Center for Underground Gasification of Coal) of the GIG (Główny Instytut Gornictwa, Main Institute of Mining) was held, with Deputy Minister Professor-Engineer Krupinski acting as chairman of the committee. A report was read by Engineer K. Meisner, director of the above research center, on the progress of construction on an experimental center. After hearing this report, the members accepted and confirmed further work on the experimental center.

The members of the committee then reviewed and established a program of future studies for the research center.

At the close of the meeting, the committee resolved to interest the Polish Academy of Sciences in the work of GIG on the problem of underground gasification of coal.

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